

Claims:

The following is a listing of all claims in the application with their status and the text of all active claims.

1.-10 (CANCELLED)

11. (NEW) A method for control of a switching regulator, the switching regulator including a parallel series of high side switches and a parallel series of low side switches with the high and low side switches connected to a common inductor, the method comprising:

- a) closing m of the high side switches;
- b) opening all of the high side switches;
- c) closing m of the low side switches;
- d) opening all of the low side switches; and
- e) repeating steps a through d while varying the number m in proportion to the load applied to the switching regulator.

12. (NEW) A method as recited in claim 11 in which the high side switches are opened when the rate of current flowing from the high side switches to the inductor exceeds a predetermined maximum.

13. (NEW) A method as recited in claim 11 in which the high side switches are opened when the output of the regulator exceeds a first predetermined voltage.

14. (NEW) A method as recited in claim 11 in which the low side switches are opened when the output of the switching regulator falls below a second predetermined voltage.

15. (NEW) A method as recited in claim 11 in which the low side switches are opened to prevent current flowing from the inductor to the low side switches.

16. (NEW) A method as recited in claim 11 where the steps of closing and opening the high side switches is controlled to avoid a predetermined switching frequency.

17. (NEW) A switching regulator that comprises:
an inductor;
a parallel series of high side switches;
a parallel series of low side switches with the high and low side switches connected to the inductor;
a feedback circuit configured to monitor the load applied to the switching regulator;
a controller configured to:
a) close m of the high side switches;
b) open all of the high side switches;
c) close m of the low side switches;
d) open all of the low side switches; and
e) repeat the steps a through d while varying the number m in proportion to the load applied to the switching regulator.

18. (NEW) A switching regulator as recited in claim 17 that further comprises a circuit for monitoring the current flowing through at least one of the high side switches and in which the controller is configured to open the high side switches when the rate of current flowing from the high side switches to the inductor exceeds a predetermined maximum.

19. (NEW) A switching regulator as recited in claim 17 that further comprises a circuit for monitoring the voltage at the output of the switching regulator and in which the controller is configured to open the high side switches when the output of the regulator exceeds a first predetermined voltage.

20. (NEW) A switching regulator as recited in claim 17 that further comprises a circuit for monitoring the voltage at the output of the switching regulator and in which the controller is configured to open the low side switches when the output of the switching regulator falls below a second predetermined voltage.

21. (NEW) A switching regulator as recited in claim 17 that further comprises a circuit for monitoring the current flowing through at least one of the low side switches and in which the controller is configured to open the low side switches to prevent current flowing from the inductor to the low side switches.

22. (NEW) A switching regulator as recited in claim 17 in which the controller is configured to control the opening and closing of the high side switches to avoid a predetermined switching frequency.